

**CERTIFICATE OF MAILING/FACSIMILE TRANSMISSION/EFS-WEB (37 CFR 1.8)**

I hereby certify that this paper (along with any paper referred to as being transmitted therewith) is ( ) being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop, Commissioner for Patents, P.O. Box. 1450, Alexandria, Virginia 22313-1450, **or** ( ) being transmitted by facsimile to the U.S. Patent and Trademark Office. (Fax No. 571 273 0052) ( pages), the facsimile is being sent from (908) 429-3650, **or** (**XXX**) being submitted via EFS-Web under Private PAIR .

\_\_\_\_\_  
Alan P. Kass  
(Print Name)

Date: January 29, 2009

\_\_\_\_\_  
/alan p. kass/  
(Signature)

---

Docket No. 2003US310

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

APPEAL NUMBER 2009-1155

In re the application of:

Medhat A. TOUKHY et al.

Art Unit: 1795

Serial No. 10/677,318, filed October 3, 2003

Examiner: SCHILLING, Richard L.

For: **BOTTOM ANTIREFLECTIVE COATINGS**

**LETTER**

January 29, 2009

Board of Patent Appeals and Interferences  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**Attached:**  
Letter - 3 pages  
Copy of Office Action from copending  
application Serial No. 11/873,522 - 6 pages

Serial No. 10/677,318  
Filed: October 3, 2003

APPEAL NUMBER 2009-1155

Dear Sir:

Appellants updated the status of their pending divisional application in a Status Update dated January 8, 2009.

Subsequent to that date, appellants received an Office Action from the United States Patent and Trademark Office, mailed on January 26, 2009, wherein prosecution was reopened in the divisional application. A copy of the Office Action is attached.

In reopening prosecution, the pending claims in the divisional application are now rejected under either 35 U.S.C. § 102(b) or under 35 U.S.C. § 103(a) over Pawlowski et al (US 6,277,750). It is noted that in approving the reopening of prosecution, the Patent Office did not continue to reject the claims in the divisional application under 35 U.S.C. § 112, first paragraph.

It is appellants' belief that since a rejection under 35 U.S.C. § 112, first paragraph, in the divisional application was not made when prosecution was reopened, appellants have traversed the 35 U.S.C. § 112, first paragraph, rejection on the basis of their appeal brief.

Since the same 35 U.S.C. § 112, first paragraph, rejection was made in the instant application, appellants believe that the Board should give due consideration to the review by Supervisory Patent Examiner in reopening prosecution without making a rejection under 35 U.S.C. § 112, first paragraph, when considering the 35 U.S.C. § 112, first paragraph, issue in the present case on appeal.

Serial No. 10/677,318  
Filed: October 3, 2003

APPEAL NUMBER 2009-1155

Respectfully submitted,

/alan p. kass/  
Attorney for Appellant(s)  
Alan P. Kass  
(Reg. No. 32142)  
70 Meister Avenue  
Somerville, New Jersey 08876  
Telephone: (908) 595-3890  
Telefax: (908) 429-3650

Customer No. 26,289



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/873,522	10/17/2007	Medhat A. Toukhy	2003US310DIV	1837
26289 7590 01/26/2009 AZ ELECTRONIC MATERIALS USA CORP. ATTENTION: INDUSTRIAL PROPERTY DEPT. 70 MEISTER AVENUE SOMERVILLE, NJ 08876			EXAMINER LEE, SIN J	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 01/26/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 11/873,522	<b>Applicant(s)</b> TOUKHY ET AL.	
	<b>Examiner</b> Sin J. Lee	<b>Art Unit</b> 1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. In view of the appeal brief filed on 10/22/2008, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1795.

***Claim Objections***

2. Claim 13 is objected to because of the following informalities: claim dependency of present claim 13 needs to be changed from "claim 1" to --- claim 11 ---. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

Art Unit: 1795

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 11-14, 17-22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Pawlowski et al (US 6,277,750 B1).

In claims 1 and 9 (see also col.10, lines 44-56), Pawlowski teaches a bottom anti-reflective coating composition containing uracil resin (as a crosslinking agent). Uracil is *named in present specification (pg.8) as one of examples of bases that are not soluble in typical solvents of photoresist compositions*. According to claims 13-14, Application Example in col.12, lines 34-59, and col.11, lines 44-67, col.12, lines 1-8, Pawlowski dissolves his composition in an organic solvent (such as cyclohexanone – see Example 1). The filtered solution is then coated onto a semiconductor substrate. Then the solvent is *thermally (by heating)* removed to form a substrate coated with the bottom anti-reflective coating composition. Then a positive or negative working photoresist is applied on a semiconductor substrate coated with a thin layer of a bottom anti-reflective coating composition. The resist coated substrate is exposed with radiation, is subjected to a post-exposure bake, developed, and then wet-etched (which implies that the antireflective coating is developable in the developer) or dry-etched to transfer the image onto the substrate. Thus, Pawlowski teaches present inventions of claims 1-8, 11-14, 17-22 and 25 (present claims define solubility relative to the

Art Unit: 1795

photoresist solvent which is not identified in the claims so that insolubility in some photoresist solvent is all that is required by the present claims).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 10, 15, 16, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlowski et al (US 6,277,750 B1).

Pawlowski teaches that his thermal crosslinking agent such as uracil can be present in the amount of 5-50 pbw in the bottom anti-reflective coating composition. Since this range overlaps with present ranges of claims 9, 10, 15, 16, 23, and 24, the prior art renders present ranges prima facie obvious. In the case "where the [claimed] ranges overlap or lie inside ranges disclosed by the prior art," a prima facie case of obviousness would exist which may be overcome by a showing of unexpected results, In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Thus, Pawlowski's teaching renders obvious present inventions of claims 9, 10, 15, 16, 23 and 24.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.



Art Unit: 1795

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sin J. Lee/  
Primary Examiner, Art Unit 1795  
January 19, 2009